

# 2013 UDOT RESEARCH PROBLEM STATEMENT

\*\*\* Problem statement deadline is March 25, 2013. Submit statements to Steve Bagley at [sbagley@utah.gov](mailto:sbagley@utah.gov) \*\*\*

**Problem Title:** Driving Cost Savings Using The Automatic Digital Device

**No. UT-13.02.09**

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**UDOT Champion (suggested):**

**Select a Subject Area**

☐ Materials/Pavements

☒ Maintenance

☐ Traffic Mgmt/Safety

☐ Geotechnical

☐ Preconstruction

☐ Planning/Asset Mgmt

☐ Transportation Innovation

## 1. Describe the problem to be addressed.

Fleet cost savings through digital monitoring of driving patterns and vehicle performance.

## 2. Describe why this research is important and how it is unique.

This concept is a new and innovative gadget that will allow UDOT to save money on gas and normal wear and tear on their fleet vehicles. *Automatic* learns about your driving style and gives you subtle audio cues when you do things that waste gas, like:

### Rough Braking

Braking abruptly decreases fuel efficiency and dramatically increases wear-and-tear on your car's brake pads.

### Speeding

Highway speeding may not save you much time, but driving 10 MPH over the speed limit reduces fuel efficiency by 12-15%.

### Rapid Acceleration

Stepping hard on the gas pedal decreases fuel efficiency and wastes money.

*Automatic* shows how you're doing on every trip.

### Drive Score

*Automatic* scores your driving every week to help you improve. A high score could save you hundreds on gas every year.

### Trip Timeline

The *Automatic* app displays detailed info about your week, like how much you drive and where. See the actual MPGs for all your trips, even for older cars that don't display fuel efficiency on the dashboard. *Automatic* also detects fill-ups and even tracks local gas prices to show you how much you're spending. The *Automatic* app displays detailed info about your week, like how much you drive and where. The *Automatic* shows how you're doing on every trip.

### Crash Alert<sup>BETA</sup>

The *Automatic Link* includes a built-in accelerometer that can detect many types of crashes. *Automatic* uses your

phone's data connection to immediately report the crash to 911\* with your name, location, and vehicle description.

Once help responds, *Automatic* can send a text message to your loved ones to let them know what happened, where you are, and that help is on the way.

### Engine Health

*Automatic* shows you what those Engine Trouble Codes mean and in many cases offers possible solutions. For simple problems, you can even clear the light yourself, and save a trip to the shop. For more complicated issues, *Automatic* shows you well-reviewed mechanics nearby. Call them or get directions with a tap.

### Easy Install, No Tools Required

The *Automatic Link* plugs into the same port your mechanic uses when you take your car in for service. It's easily accessible near the steering wheel.

#### 3. List the research objective(s) to be accomplished:

1. Place several Automatic digital devices in UDOT fleet vehicles
2. Monitor driving patterns and analyze the data to understand how UDOT can save gas and normal wear and tear costs.

#### 4. List the major tasks to accomplish the research objective(s):

1. Place several Automatic digital devices in UDOT fleet vehicles
2. Monitor driving patterns and analyze the data to understand how UDOT can save gas and normal wear and tear costs.
3. Submit recommendations to UDOT Senior Leaders of cost saving methods based on data analysis.

**5. List the deliverable(s) to come to UDOT from this research study:**

1. A small report for UDOT Senior Leaders that will contain: Method used, Data Collected, Data analyzed, and recommendations.

**6. Describe how the results of this study will be implemented at UDOT.**

The final report will recommend cost saving solutions to Senior Leaders and will suggest that every UDOT fleet vehicle will contain an Automatic digital device and iphone.

**7. Estimated cost - Total:** \$1,000

**UDOT Share:** \$

**Other/Matching Funds:** \$

**8. Outline the proposed schedule for this study, including estimated start date, duration, and major event dates.**